**WORLD VEGETABLE CENTER**

**TRIP REPORT**

**1. Name of traveler(s)**

* Inviolate Dominick
* Hassan Mndiga
* Nickson Mlowe
* Ritha Luoga
* Gilbert Mushi

**2. Purposes of trip**

* Conduct TOT general Training to lead farmers, community based facilitators, government extension Agent and field technical staff working for KIlimo Endelevu project under Island of Peace (IOP) in Karatu District on Safe and Sustainable Vegetable Production to improve household nutrition and income generation
* Data collection on insects population dynamics from sticky traps installed at each demo plots
* Marking of GPS coordinates of farmer demo plots in project villages

**3. Country(s) visited**

Tanzania

**4. Dates of trip**

March 16-20, 2020

**5. Budget source**

10000175-13

**6. List of people met during the trip and their details**

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| --- | --- | --- |
| **Name** | **Title** | **Contact** |
| Ayesiga Buberwa | Project Manager - IDP | ayesiga.buberwa@tz.ilesdepaix.org |
| Wayda Peter | Karatu District Council – Focal person | Waydapeter12@gmail.com |
| Silvester Masanja | Project Officer -RECODA | jnganga@recoda.or.tz |
| Calib Massam | Field Officer - RECODA | cmassam@recoda.or.tz |
| Musa Chamwilambo | Extension staff- Endelevu- Karatu | + 255 756549677 |

**7. Important results/information gathered during the trip**

**TOT TRAINING**

* Institutional capacity development is a cross-cutting feature integrated across project components, and is intended to ensure sustainability and effective performance. To achieve this objective World Vegetable Center-East and Southern Africa with financial support from Africa RISING project has conducted Training of Trainers (TOT) for the field technical staff, farmer trainers and government Extension officers supported by Kilimo Endelevu partner project operating in Karatu District. The trained facilitators will in turn train other farmers in selected project villages.
* The TOT training was successfully held from 16 to 20 March 2020 at Kilimo Endelevu office in Karatu District and out in the villages for the practical sessions.
* A total of 41 participants (22 male and 19 female) attended the training out of which 33 were farmer group representatives from 8 villages, 4 extension agents, 1 District government staff from Karatu District DAICO office, and 3 technical staff from Kilimo Endelevu Project in Karatu district.
* The training was organized into six main modules; Module **1:** Principles of vegetable production; Module **2:** Seed quality, features preservation and impacts of good seed on productivity; Module **3:** Integrated Pest Management/approaches to prevent pest and diseases on vegetables; Module **4:** Natural fertilizers: types and uses; Module **5**: Vegetable farming as a business; and Module **6:** Data collection and Farm record Keeping
* The Topics covered included Introduction to principles of vegetable production, types of nursery, preparation and management, organic farming, IPM Farmer friendly approaches, list of natural pesticides used in vegetables which are familiar to training participants, methods of preparation and uses; preparation of key hole garden, market information, development of activity plan and data collection in demo trials as stipulated in the training program (ANNEX 1)
* Training Methodology and Procedures used were much focuses on practical group work and experience sharing as much as possible together with lectures, brainstorming, questions and answers. Means used for interactions included power point presentations, discussions, group work, plenary presentations, practical demonstrations and training evaluation.
* Prior to the training sessions, participants brainstormed on their expectations and the trainers collected these expectations. The result of this revealed that 97% of training participants were interested to receive knowledge and skills on how to control fungal diseases and insect pests specifically *Tuta absoluta* in tomatoes and other vegetables of the solanaceae family by using natural pesticides
* During the last day of the training, farmers and extension agents developed their action plans and way forward regarding the implementation of activities in demo trials for the 2nd season as well for the farmer group vegetable fields.
* At the end of the training, farmer group representatives and extension agents received vegetable seed kits for the establishment of the demo plots as well for their own vegetable gardens and for other farmer who did not attend the training. Each Seed packet distributed contained 2 grams of 3 varieties (Ethiopian Mustard, Variety-Tengeru White; Tomatoes, Variety-Tengeru 97; and African Nightshade, Variety-Nduruma.
* Training participants also received learning materials on the topics covered during the training for references. This will significantly facilitate implementation of the activities when they return to their villages.
* During the last day of the training participants were asked to evaluate the training to assess the overall performance and the extent to which the training objectives were met, the relevance and usefulness of the training's content, performance of trainers, the appropriateness of the training methodologies used, usefulness of the materials used and logistics of the trainings. An evaluation questionnaire was used for this end.
* Participants showed interest for most of the presented topics; they were motivated and creative. This is also shown by the high marks they gave in their evaluation of the training session.
* Based on evaluation form results compared to the pre‐test results, knowledge about the training modules and topics covered was improved. The highest increase is identified on knowledge and skills obtained regarding Good Agronomic Practices (GAP) specifically on skills gained on pest and disease identification and control measures as well on how to prepare natural pesticides, preparation of soil medium and key hole garden for the establishment of vegetable crops.
* Participants requested more trainings in future regarding the same modules covered and others which would certainly be topics suitable for future across WorldVeg-KE partner project activities. Based on participants comments the training modules can be organized and facilitated through farmer field schools or workshops that should include vegetable farming as a business and Nutrition (food, diet and nutrients and its relationship) This need comes from the fact that the duration of 5 days scheduled for the training wasn’t long enough for the participants to understand and practice what has been taught and demonstrated.

**COLLECTION OF GPS COORDINATES AND DATA FROM STICKY INSECT TRAPS**

* Data collected from sticky traps from vegetables crops in Karatu district and samples of plants attacked / affected by diseases were shared and discussed with participants during the training as well measures to control these pests and diseases were also discussed.
* GPS coordinates of 8 demo plots from 5 villages were recorded in order to facilitate the follow up during field visits, data collection, and visualization of plots distribution in the landscape.

**8. Suggestions for follow up**

* Inviolate, Hassan, Ritha and Nickson on in collaboration with extension agents to follow up on nursery establishment in demo trials, proper data collection, facilitate farmers on pest and disease identification, pesticide sources, handling and use based on recommended pesticide rates, insist on importance of scouting of pest and how to do scouting so that farmers do it regularly; ensure that farmers follow recommended Good Agronomic Practices (GAP) throughout the experiment trial and use of industrial pesticide be the last option.
* Extension agents to facilitate farmers to plant border crop such as millet around the demo plots.
* Train participants under support from District focal person, extension agents and KE field technical staff, to organize meetings and facilitate/ brief farmer group members who did not attend the training on what they have learnt in the training including practical demonstrations.
* District focal person, extension agents and KE field technical staff to facilitate farmers to sterilize soil medium, sow seeds in plastic trays as well as following farmer practice and plant millet or other live fence around the demo plots.
* Inviolate and Hassan in collaboration with Karatu District focal person, extension agents and IDP field technical staff, to make close follow up on the establishment and management of nurseries for demo trials, home gardens and the preparation of demo plots as well assisting farmers to practice good field sanitation to reduce usage of pesticide so that they can have safe vegetables, add value of their produce to fetch good price and reduce environmental pollution.
* Inviolate and Nickson to finalize collection of GPS coordinates from remaining demo plots in all 8 project year one villages.

**9. Photos or other supporting documents**

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**Figure 1: From left discussion on IPM Approaches (right) participants** **Question and answers on going during training sessions**



**Figure 2☹ Left) Participants group discussions ;( right) presentation of group work by participants**

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**Figure 3: Identification of pests and diseases by facilitator and farmers during practical training sessions**

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**Figure 4: (Left) Demonstration on Preparation of natural pesticides; (right) Soil sterilization practical training in progress**

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**Figure 5: (Left) Demonstration on establishment of keyhole garden and water application (Right)** **Distribution of vegetable seed kits for demo plots**

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| ANNEX I: TOT Training Timetable on Vegetable Good Practices to KE participants – 16-20 March, 2020 | | | |
| DAY AND DATE | **TIME** | **TOPIC/ SESSION/ACTIVITY** | **RESPONSIBLE** |
| 16/03/2020 | **8.00 -9-00 Am** | **Arrival and Registration** | **CALIB /MUSA / Ritha Luoga** |
| MONDAY | **9.00-9.30** | * Introduction * House keeping | DR. MASANJA |
|  | **9.30-.10.00** | * Participants Expectations * Workshop objectives | HASSAN/INVIOLATE  TRAINING PARTICIPANTS |
|  | **10.00-10.30** | PRINCIPLES OF VEGETABLE PRODUCTION | INVIOLATE |
|  | **10.30-11.00** | **Tea break** | **ALL** |
|  | 11.30 – 13.00 | SEED QUALITY, FEATURES PRESERVATION AND IMPACTS OF GOOD SEED ON PRODUCTIVITY. | HASSAN |
|  | **13.00 – 14.00** | **Lunch** | **ALL** |
|  | **14 .00- 16.15** | **Group work**  Preparation of nursery potting mixture, soil sterilization and seed sowing | HASSAN/ INVIOLATE/NIXON /Workshop Participants |
|  | **16.15--16.30** | End of the day evaluation | INVIOLATE/HASSAN / MASANJA |
| 17/3/2020 | **8.30 – 9-00** | **Recap** | **INVIOLATE/HASSAN** |
| TUESDAY | **9.00 - 10.30** | INTRODUCTION TO INTEGRATED PEST MANAGEMENT(IPM)   * organic farming * Integrated pest management -Farmer friendly approaches * Integrated approaches/methods to prevent pest and diseases in vegetables /control | HASSAN/NIXON |
|  | **1030-11.00** | **Tea break** | **ALL** |
|  | **11.00- 13.00** | * Experience sharing on Identification of pest and diseases COMMONLY affecting vegetables in Karatu –District including symptoms & control measures , * Control of ***Tuta Absoluta*** in tomato | HASSAN/NIXON |
|  | **13.00- 14.00** | **Lunch** | **ALL** |
|  | **14.00- 16.00** | **Group work**   * Preparation of Natural pesticides that proved to be effective on controlling pests and diseases commonly affecting vegetables in Karatu | HASSAN/INVIOLATE/NIXON  Workshop Participants |
|  | **16.00 – 16.30** | End of the day evaluation | INVIOLATE/HASSAN NIXON |
| 18/03/2020 | **830 – 9-00** | **Recap** | **HASAN/NIXON** |
| WEDNESDAY | **9.00 - 10.30** | * Relationship between Plant health and Human Health (crop-nutrient diversity ) | INVIOLATE |
|  | **10.30- .11..00** | **Tea break** | **ALL** |
|  | **11.00 - 13.00** | NATURAL FERTILIZERS, TYPES AND USE | HASSAN |
|  | **13.00- 14.00** | **Lunch** | **ALL** |
|  | **14.00- 16.30** | **Group work**   * Preparation of Key hole garden | HASSAN/INVIOLATE |
|  | **16.30- 16.45** | End of the day evaluation | INVIOLATE/HASSAN |
| 19/03/2020 | **830 – 9-00** | **Recap** | **HASSAN/IVIOLATE** |
| THUESDAY | **9.00 - 10.30** | VEGETABLE FARMING AS A BUSINESS   * Market Information | HASSAN |
|  | **10.30-11.00** | **Tea break** | **ALL** |
|  | **11.00-13.00** | * Experience sharing on Worldveg youth Vegetable Business Hub   (BPH- Tanzania) | HASSAN |
|  | **13.00-14.00** | **Lunch** |  |
|  | **14.00- 16.15** | FARM RECORD KEEPING | HASSAN  INVIOLATEWAYDA/RITHA |
|  | **16.15- 16.30** | End of the day evaluation | INVIOLATE/HASSAN |
| 20/03/2020 | **8.30 – 9-00** | **Recap** | **HASSAN/INVIOLATE** |
| FRIDAY | **9.00 - 10.30** | * Presentation of on farm activity plans | INVIOLATE |
|  | **10.30-11.00** | **Tea break** | **ALL** |
|  | **11.00-12.00** | **Group Work**   * Development of activity plan and way forward * Data collection | INVIOLATE/HASSAN /RITHA |
|  | **12.00-13.00** | * Distribution of vegetable seeds for demos and farmer group home gardens * Distribution of learning materials | INVIOLATE/HASSAN /RITHA |
|  | **13.00- 14.00** | **Lunch** | **ALL** |
|  | **14.00-15.00** | * End of Training Evaluation | HASSAN/INVIOLATE/RITHA |
|  | **15.00.15- 30** | * Official closing | DAICO/DR. MASANJA |

Success story developed and shared in Worldveg FRESH news (https://avrdc.org/farmers-learn-together-field-days) Success story developed and shared in Worldveg FRESH news (<https://avrdc.org/farmers-learn-together-field-d>

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